

REMARKS

Review and reconsideration on the merits are requested.

Applicants appreciate the Examiner indicating that the drawings filed August 22, 2004 are accepted, and acknowledging receipt of certified copies of the priority documents.

At the time of rejection, claims 1 and 9-25 were pending and claims 1 and 19-25 were rejected.

The prior art: U.S. Patent 2,713,379 Sisson (Sisson); U.S. Patent 2,519,107 Brown (Brown); the admitted prior art in the specification (the admitted prior art-specification pages 1 and 2); U.S. Patent 4,335,873 Kiefer (Kiefer); U.S. Patent 2,705,084 Willfond (Willfond); U.S. Patent 3,935,055 Carmien (Carmien); U.S. Patent 1,782,615 Hopwood (Hopwood).

Having set out the prior art, Applicants now address the rejections, after a brief discussion of the Examiner's suggestion at the bottom of page 2 of the Action.

The Examiner has, of course, correctly interpreted the claims and Applicants intend to positively limit the claim to a cushioning member on only one side to overcome Brown. Thus, Applicants adopt the Examiner's suggestion by amending claims 1, 19 and 24 (not 14) by inserting --only on a single side of said mated portions of said non-magnetic members--.

In addition, in claims 1, 19 and 24, Applicants delete the language "by disposing said cushioning member on one side of said mated portions of said non-magnetic members" in view of the above amendments suggested by the Examiner.

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Turning to the rejection of claims 19, 21 and 23 as obvious over Sisson and any one of Kiefer, Willfond, Carmien or Hopwood as in the Action applied further in view of the admitted prior art or alternatively the admitted prior art in view of Sisson and any one of Kiefer, Willfond, Carmien or Hopwood, Applicants appreciate the Examiner indicating that claim 19, if amended to incorporate the pressure, temperature and heat resistance requirements of claim 24, would be allowable.

Applicants so amend claim 19, and believe claims 19 and claims dependent therefrom, specifically claims 21 and 23 should be in condition for allowance.

The Examiner's position regarding the prior art is set forth in detail in the Action and will not be repeated here except as necessary to an understanding of Applicants' traversal which is now presented.

Rejection of claims 1, 20, 22, 24 and 25.

Applicants believe that the thrust of the suggestion of the Examiner at the bottom of page 2 of the Action is that limiting as the Examiner has suggested would avoid the rejection under 35 U.S.C. § 103 (a) over Sisson in view of Brown. However, Applicants do offer remarks thereon since this will set the stage for their traversal of other rejections.

Distinguishing features of the claim invention are found in the use of a cushioning member interposed only on a single side of the mated portions of the non-magnetic members between a pressing surface of the pressing magnet jig and outside surfaces of the mated portions of the non-magnetic members so as to subject the whole bonding surfaces to contact uniformly with the adhesive sheet.

In contrast to amended claim 1 of the present application, although Sisson teaches a method for bonding overlapping portions of strips by placing mated portion of the strips (via a bonding film) between a pressing magnet jig and a pressure-receiving soft magnetic jig (column 1, lines 15-19, column 2, lines 21-24, lines 44-50 and Fig. 2 of Sisson), Sisson fails to teach or suggest the use of the one or more cushioning members interposed only on a single side of the mated portions of the non-magnetic members between a pressing surface of the pressing magnet jig and outside surfaces of the mated portions of the non-magnetic members, thereby subjecting the whole bonding surfaces to contact uniformly with the adhesive sheet.

Accordingly, Sisson provides no motivation for one of ordinary skill in the art to reach the present invention.

Brown discloses a cushioning device used in association with clamps, clamping brackets or the like which will provide a device that prevents the surface of work to which the clamps or the like are attached from becoming scratched, deformed or otherwise damaged.

Applicants wish to emphasize the following teaching in Brown. Specifically, the fact that the cushioning device of Brown shown in Fig. 1 consists of pad 17 positioned adjacent motor board engaging surfaces 13 of stationary jaw 12 and pad 18 positioned on movable jaw (or clamping head) 14; see column 2, lines 8-19; and Fig. 1 of Brown attached hereto. As a consequence of such a configuration in Brown, during use of the cushioning device of Brown, pads 17 and 18 contact the surfaces of the motor mounting board on which the bracket 10 is positioned, so that the surfaces of the motor mounting board may be effectively protected from scratching, etc. Further, the effect that the cushioning device of Brown as shown in Fig. 3 of

Brown, which consists of a pair of resilient pads 26 secured by an adhesive to opposed faces 27 of the clamping jaws 28 is the same as in the case of Fig. 1 of Brown, i.e., the object is to protect both surfaces of two pieces of wood held together during construction or fabrication of a product.

It is quite clear that the cushioning device of Brown is directed to preventing both surfaces of the work to which the clamps are attached from becoming scratched, deformed or otherwise damage (underscoring added).

As a consequence, Brown fails to teach or suggest any cushioning member interposed only on a single side of the mated portions of the non-magnetic members, etc., as called for in the claims of the present application.

Accordingly, the combination of Brown and Sisson fails to teach or suggest the use of a cushioning member on a single side of said non-magnetic members, etc., as claimed herein.

With respect to claims 20 and 22 which depend from claim 21, their patentability over Sisson/Brown is believed clear from the above discussion.

Withdrawal is requested.

Applicants now turn to claim 24, also rejected over Sisson in view of Brown.

The Examiner is requested to refer to claim 24 as currently amended.

Distinguishing features of the invention set forth in claim 24 as now amended are found not only in a cushioning member interposed on only a single side of the mated portions of the non-magnetic members...so as to subject the whole bonding surfaces to contact uniformly with the adhesive sheet **but also** in the recited applying pressure for curing, the thermosetting temperature and the heat resistance temperature.

Sisson and Brown do not teach any of the above limit.

Accordingly, claim 24 quite clearly is unobvious over Sisson and Brown.

Claim 25 depends from claim 24 and Applicants rely upon their arguments for claim 24 regarding claim 25.

The Rejection of Claims 19, 21 and 23

Applicants now address the rejection of claims 19, 21 and 23 as obvious over Sisson and Brown as above and further in view of the admitted prior art or alternatively the admitted prior art in view of Sisson and Brown. Although claim 19 as amended should be allowable, Applicants offer a few remarks in view of their later traversal of the last prior art rejection

The Examiner is requested to refer to claim 19 as currently amended. As can be seen, the amendments to claim 19 parallel the amendments to claim 24 regarding “only on a single side of said mated portions of said non-magnetic members” and the deletion in claim 24, but claim 19 also now includes the applying pressure/thermosetting temperature/heat resistance temperature limits of claim 24.

Applicants respectfully submit that the above two limits, namely the “only on a single side of the mated portions...” and the pressure for curing/thermosetting temperature/heat resistance temperature of claim 19 quite clearly distinguish Sisson and Brown.

Further, it is equally as clear that neither Sisson nor Brown teach the non-magnetic members being half-cylindrical skin members made of a fiber-reinforced composite material for constituting a fuselage of aircraft so as to reduce the weight of transport vehicles including aircraft.

It is appropriate, however, to turn to the admitted prior art.

Applicants respectfully submit that the admitted prior art fails to teach or suggest not only a pair of half-cylindrical skin members made of a fiber-reinforced composite material as the non-magnetic members for constituting a fuselage of aircraft so as to reduce the weight of transport vehicles including aircraft but also the use of any cushioning member interposed only on a single side of the mated portions of the non-magnetic members between a pressing surface of the pressing magnet jig and outside surfaces of the mated portions of the non-magnetic members so as to subject the whole bonding surfaces to contact uniformly with the adhesive sheet.

Accordingly, Sisson/Brown/the admitted prior art or the admitted prior art/Sisson/Brown cannot render claim 19 obvious.

Applicants rely upon their arguments regarding claim 19 to support the unobviousness of claims 21 and 23.

Rejection of claims 1, 20, 22, 24 and 25

Applicants now turn to what they believe to be the Examiner's basic position on the claims as amended, namely the rejection of claims 1, 20, 22, 24 and 25 as obvious over Sisson in view of anyone of Kiefer, Willfond, Carmien or Hopwood.

In their earlier discussion regarding amended claim 1 and claims 20 and 22 (dependent from amended claim 1), amended claim 4 and claim 25 (dependent from amended claim 24), Applicants believe they have clearly established that the indicated claims are not obvious over Sisson.

Applicants now turn to the remaining references.

Applicants reproduce and attach hereto the following Figures: Fig. 1 Kiefer; Fig. 1 Willfond; Fig. 3 Carmien; Fig. 2 Present invention and Fig. 1 and Fig. 4 Hopwood.

These Figures will aid in an understanding of Applicants' traversal which is now presented.

Referring first to Kiefer and Willfond, in Kiefer work engaging bumper 24 made of the elastic cushioning materials of is disposed on a single side between workpiece 25 and the lower end of plunger 19. In a similar fashion, cushion pad 42 of Willfond is also on a single side and is disposed between the bottom end of housing 14 and the upper surface of a pile of sheets S so as to prevent scratching of the top sheet of the pile of sheets S when bearing device 12 is clamped there against. See column 2, lines 41-45 of Willfond. It is easily seen that the respective pressing force through bumper 24 of Kiefer and cushion pad 42 of Willfond is transferred only through the contact area, not so as to be uniformly transferred onto the whole surface of the workpiece 25 in Kiefer and the upper surface of the pile of sheets S in Willfond.

Referring now to Fig. 3 of Carmien, in Fig. 3 a tape applicator 17 made of cast silicon rubber is also single side disposed with respect to masking tape 23 which is to be pressed into a concave hollow portion 18 of the tape applicator 17 by a downward movement thereof to thereby cause the masking tape 23 to seal the opening of a tool head 21 by bonding the tool head 21 and the adhesive carried by the tape 23, whereby pressure is applied to all of the peripheral edges of the tape 23 substantially simultaneously while no pressure is applied against the mid portion of tape 23 which extends across the top of the opening 24; see column 2, lines 64-68 and column 3, lines 24-47 of Carmien.

Regarding Fig. 3 of Carmien, in more detail, a masking tape 23 covers the whole bonding surface of the peripheral edges of a tool head, but it is pressed into a concave hollow portion 18 of a tape applicator 17 made of cast silicon rubber (cushioning member) and downward movement thereof subjects the masking tape 23 to sealing the opening of a tool head 21 with pulling and stretching the tape outwardly beyond the tool head 21 to be bent downwardly so as to bond the tool head 21 and the adhesive carried by the tape 23, whereby pressure is applied upon all of the peripheral edges of the tape 23 without substantially applying the pressure against the mid portion of the tape 23 which extends across the tope of the opening 24 (emphasis added) (see column 3, lines 24-47 of Carmien)

Carmien thus fails to teach or suggest the use of a workpiece arranged between tape applicator 17 and the contour of the upper portion of the tool head 21 whereby the whole bonding surfaces would be contacted uniformly with an adhesive sheet and Carmien does not teach or suggest the features of the present invention to use cushioning member comprising two separate parts each interposed only the single side of the mated portion of the non-magnetic members between a pressing surface of the pressing magnet jig and the outside surfaces of the mated portions of the non-magnetic members, the two separate parts being spaced apart sufficiently from each other to subject the whole bonding surfaces to contact uniformly without pulling and stretching (emphasis added)..

With respect to Hopwood, Hopwood discloses a work holder unit which is adapted to be used by seamstresses and the like who do needle work. The Hopwood work holder unit is capable of clamped to the arm of a chair, to the table of a sewing machine, etc., the holder having

a swivel cushion head 8 arranged on the top of clamping bolt 7 at an inner end of the unit for engagement with the underside of a table A or armchair, whereby the unit is rigidly secured thereto. See Hopwood first text page at left column, lines 1-8, right column, lines 56-59 and Fig. 1 and Fig. 4 of Hopwood. While cushion head 8 is single side disposed between the upper surface of, e.g., table A and clamping bolt 7, there is no workpiece therebetween since the work holder unit must be rigidly secured by the combination of elements.

As is clear from Figs. 1 and 4 of Hopwood, Fig. 1 is a figure showing a work holder unit before fixing a material F, such as fabric, between a pair of cushion block or plate 10 arranged on the forward ends of superposed flat jaw members 9 and 14 before seamstresses and others who do needle work perform needle work by fixing the material F between a pair of cushion blocks or plate 10, while Fig. 4 is a figure showing a work holder unit clamped to the table A (of a sewing machine) between a swivel cushion head 8 arranged on the top side of a clamping bolt 7 in an inner end of the unit for engagement and the underside of the table A, whereby the unit is rigidly secured thereto (see left column, line 44 to right column, line 80 of Hopwood).

Therefore, each cushion block or plate 10 arranged on the forward ends of a pair of superposed flat jaw members 9 and 14 is not concerned in the engagement of the holder unit with the underside of the Table A.

It is to be especially noted that each cushion block or plate 10 arranged on the forward end of a pair of superposed flat jaw members 9 and 14 in Hopwood has no relationship to the engagement of the holder unit with the underside of the table A.

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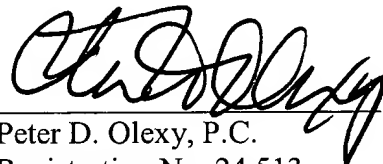
From the above discussion, Applicants believed it clear that each of Kiefer, Willfond, Carmien and Hopwood is different from the present invention in having no member which corresponds to a workpiece in accordance with the present invention which is contacted with one or more cushion members to have a contact area sufficient to withstand the applied pressure for a pressing surface, to thereby bond the mated portions of non-magnetic members in a manner which subjects the whole bonding surfaces to contact uniformly with the adhesive sheet (the present invention).

Accordingly, Applicants respectfully submit that one of ordinary skill in the art referring to Sisson in combination with any one of Kiefer, Willfond, Carmien or Hopwood would not find the subject matter of claims 1 or 24, or the claims dependent therefrom, obvious, and respectfully request withdrawal of the rejection.

New claims 26, 27 and 28 are added; see the specification at page 7, lines 24-25; for new claims 29-31, see Figure 2 herein.

Withdrawal of all rejections and allowance is requested.

Respectfully submitted,



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